

City of Guelph IDF Curves

A = 1593

B = 11

C = .8789

Intensity = $A / (t + B)^C$

Flow (Q) = CiA (m³/s)

PVC, Concrete pipe, n = 0.013

CSP pipe, n = 0.024

STORM SEWER DESIGN

5 Year Design

City of Guelph

Sheet 1 of 2

Location				Proposed Sewer															
Reach No.	Street	From	To	Area (ha)	Runoff Coefficient	A x C	Cumulative A x C	Time of Conc. (min.)	Intensity (mm/hr)	Flow (m ³ /s)	Length (m)	Pipe Size (mm)	Type of Pipe (Mannings n)	Grade %	Capacity (m ³ /s)	Full Flow Velocity (m/s)	Actual Velocity	Time of Flow (min.)	
	STREET 1		CBMH.2	0.28	0.65	0.18	0.18	10.00	109.68	0.055									
		CBMH.2	MH.3	0.35	0.65	0.23	0.41	10.00	109.68	0.125	63.8	375	0.013	1.26	0.197	1.78	1.91	0.60	
		MH.3	MH.4	0.11	0.65	0.07	0.48	10.60	107.01	0.143	15.9	450	0.013	0.50	0.202	1.27	1.38	0.21	
		MH.4	MH.5	0	0.90	0.00	0.48	10.81	106.11	0.142	15.9	450	0.013	0.50	0.202	1.27	1.38	0.21	
		MH.5	MH.6	0.17	0.90	0.15	0.63	11.01	105.22	0.185	70.0	525	0.013	0.50	0.304	1.40	1.49	0.83	
	STREET 3	CBMH.108	MH.31	0.35	0.67	0.23	0.23	5.00	139.29	0.091	21.7	300	0.013	1.00	0.097	1.37	1.53	0.26	
		MH.31	MH.22	0.56	0.67	0.38	0.61	5.26	137.30	0.233	62.9	450	0.013	0.73	0.244	1.53	1.71	0.68	
		MH.22	MH.6	0.00	0.90	0.00	0.61	5.95	132.41	0.224	21.3	450	0.013	0.63	0.226	1.42	1.58	0.25	
	STREET 1	MH.6	DCBMH.29	0.00	0.90	0.00	1.24	11.85	101.85	0.352	10.2	600	0.013	0.50	0.434	1.54	1.70	0.11	
		CB.34	MH.27	0.12	0.70	0.08	0.08	5.00	139.29	0.033	14.7	250	0.013	5.36	0.138	2.80	2.39	0.09	
		MH.27	DCBMH.29	0.07	0.90	0.06	0.15	5.09	138.62	0.057	28.8	300	0.013	0.50	0.068	0.97	1.08	0.50	
	OUTLET TO SWM	DCBMH.29	HEADWALL	0	0.00	0.00	1.39	11.96	101.42	0.392	24.7	600	0.013	0.51	0.438	1.55	1.73	0.27	
	STREET 1	CBMH.9	MH.10	0.23	0.90	0.21	0.21	5.00	139.29	0.080	51.1	300	0.013	3.12	0.171	2.42	2.45	0.35	
		BLOCK 108	MH.10	1.19	0.75	0.89	0.89	5.00	139.29	0.345	18.0	525	0.013	0.96	0.421	1.95	2.16	0.15	
		MH.10	MH.11	0.02	0.90	0.02	1.12	5.35	136.65	0.424	16.0	525	0.013	2.54	0.685	3.17	3.38	0.08	
		MH.11	MH.12	0.03	0.90	0.03	1.14	5.44	136.03	0.432	21.5	525	0.013	5.13	0.974	4.50	4.52	0.08	
		MH.12	MH.13	0.08	0.90	0.07	1.22	5.52	135.45	0.458	56.6	525	0.013	3.61	0.817	3.77	3.96	0.25	
	STREET 2	CB.106	MH107	0.01	0.65	0.01	0.01	5.00	139.29	0.003	9.9	300	0.013	6.43	0.245	3.47	1.35	0.05	
		MH107	CBMH.29	0	0.65	0.00	0.01	5.05	138.93	0.003	24.4	300	0.013	2.00	0.137	1.93	0.80	0.21	
		CBMH.29	MH.25	0	0.65	0.00	0.01	5.26	137.35	0.002	15.7	300	0.013	1.87	0.132	1.87	0.78	0.14	
	STREET 3	CBMH.127	MH.25	0.35	0.70	0.25	0.25	5.00	139.29	0.095	8.4	300	0.013	2.33	0.148	2.09	2.24	0.07	

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STORM SEWER DESIGN

5 Year Design

City of Guelph

Sheet 2 of 2

Reach No.	Location			Area (ha)	Runoff Coefficient	A x C	Cumulative A x C	Time of Conc. (min.)	Intensity (mm/hr)	Flow (m ³ /s)	Proposed Sewer							
	Street	From	To								Length (m)	Pipe Size (mm)	Type of Pipe (Mannings n)	Grade %	Capacity (m ³ /s)	Full Flow Velocity (m/s)	Actual Velocity	Time of Flow (min.)
		MH.25	MH.26	0.39	0.65	0.25	0.51	5.40	136.32	0.191	69.9	375	0.013	1.81	0.236	2.14	2.37	0.55
		MH.26	CBMH.27	0.06	0.65	0.04	0.54	5.94	132.45	0.200	16.8	375	0.013	2.40	0.272	2.46	2.70	0.11
		CBMH.27	MH.28	0.35	0.70	0.25	0.79	6.06	131.67	0.289	50.3	450	0.013	3.14	0.505	3.18	3.34	0.26
		MH.28	DCBMH.41	0.26	0.70	0.18	0.97	6.32	129.91	0.350	45.9	600	0.013	0.54	0.451	1.60	1.76	0.48
		DCBMH.41	MH.13	0	0.70	0.00	0.97	6.80	126.83	0.342	17.0	600	0.013	0.53	0.447	1.58	1.74	0.18
		MH.13	EFO10	0.16	0.65	0.10	2.29	6.98	125.72	0.800	63.8	600	0.013	3.83	1.202	4.25	4.59	0.25
		EFO10	MH.15	0.10	0.67	0.07	2.36	7.23	124.20	0.814	15.8	600	0.013	13.48	2.254	7.97	7.64	0.03
	CITYVIEW DRIVE	DCBMH.21	MH.63	0.30	0.67	0.20	0.20	5.00	139.29	0.078	85.0	300	0.013	5.86	0.234	3.31	3.11	0.43
	LAMONT STREET (FROM WALTERFEDY)	STUB	MH.63			4.93	4.93	24.26	69.55	0.952								
	CITYVIEW DRIVE	MH.63	MH.19	0.03	0.67	0.02	5.15	24.26	69.55	0.995	9.4	1050	0.013	3.50	5.109	5.90	4.74	0.03
		MH.19	CBMH.64	0.08	0.67	0.05	5.20	24.29	69.51	1.005	30.3	1050	0.013	4.00	5.461	6.31	4.97	0.08
		CBMH.64	MH.18	0.12	0.67	0.08	5.29	24.37	69.37	1.018	29.3	1050	0.013	1.98	3.842	4.44	3.92	0.11
		CB.47	Main	0.28	0.67	0.19	0.19	5.00	139.29	0.073	38.1	300	0.013	5.84	0.234	3.31	3.05	0.19
		MH.18	MH.17	0.11	0.67	0.07	5.55	24.48	69.18	1.066	30.7	1050	0.013	3.56	5.152	5.95	4.87	0.09
		CB.32	Main	0.35	0.67	0.23	0.23	5.00	139.29	0.091	38.1	300	0.013	3.36	0.177	2.51	2.59	0.25
		MH.17	EFO12	0.23	0.67	0.15	5.94	24.56	69.03	1.138	59.5	1050	0.013	0.99	2.717	3.14	3.11	0.32
		EFO12	MH.15	0.1	0.67	0.07	6.00	24.88	68.50	1.142	20.6	1050	0.013	1.50	3.344	3.86	3.65	0.09
		MH.15	MH.40	--	--	--	8.36	24.97	68.35	1.587	15.3	1050	0.013	2.13	3.985	4.60	4.51	0.06
		MH.40	OUTLET	0	0.00	0.00	8.36	25.02	68.26	1.585	9.2	1050	0.013	0.50	1.931	2.23	2.48	0.07

Date: APRIL 2023	Revised:	Project: 105172
Designed By: SG	Revised By:	CITYVIEW DRIVE, Guelph
Checked By: SZ	Checked By:	